

At page 21, after line 20, please insert the following:

B2 -- Curve CO shows the points of a corrosion rate of 2.1 mg Pb/cm². Below this curve the corrosion rate is less depicted by CO⁺ in Figure 6. The connection point of the CO-line with the abscissa lies at 1.04% Sn. The actual Sn concentrations are within the range of 0.258% and 1.164% at the right border of the drawing.

The curve HR shows the points where a hardening rate of 12 hours to reach 90% maximum hardness is needed. To the right of this curve depicted by MH⁺ are regions with faster hardening rate. The curve MH shows the points of a maximum hardness of 21 DPH. On the right side of this curves lies the regions (MH⁺) where better maximum hardness can be reached.

To achieve good results in all these three fields namely in corrosion, hardening rate and maximum hardness an alloy should be chosen in a region where the tin content is less than about 1.2% or 1.164% as shown in Figure 6. The silver content should be below 0.0165% respectively below 0.017%. Preferred tin contents are in the range of about 0.8% to about 1.1%. Preferred silver contents are in the range of 0.005% to less than 0.017% or 0.0165% as shown in Figure 6. To avoid hot cracking sensibility (see results in Table 3) it is preferred to use low silver contents in the range of about 0.0005% to about 0.012%. . . .

IN THE CLAIMS:

Please cancel all the claims currently on file and substitute the following new claims 30-56:

30. A lead-acid cell comprising a container, at least one positive plate and a negative plate disposed within the container, a separator disposed within the container and separating the positive and negative plates, the positive plate comprising a grid supporting structure having a layer of active material pasted thereto, the grid supporting structure comprising a lead-based alloy consisting essentially of lead, tin in the range of about 0.8% to about 1.1%; calcium in an

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amount such that the ratio of tin to calcium is greater than about 12:1, and silver in the range of greater than 0 to about 0.02%, the percentages being based upon the total weight of the lead-based alloy.

31. The cell as defined in claim 30, wherein the ratio of tin to calcium is not less than 15:1.

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32. The cell as defined in claim 30, wherein the ratio of tin to calcium is not less than 20:1.

33. The cell as defined in claim 30, wherein the silver content of the alloy is in the range of about 0.005% to about 0.017%.

34. The cell as defined in claim 31, wherein the silver content of the alloy is in the range of about 0.005% to about 0.017%.

35. The cell as defined in claim 32, wherein the silver content of the alloy is in the range of about 0.005% to about 0.017%.

36. The cell as defined in claim 30, wherein calcium is present in an amount of about 0.03% to about 0.055% and the ratio of tin to calcium is not less than 15:1.

37. The cell as defined in claim 36, wherein silver is present in a range of about 0.005% to about 0.017%.

38. The cell as defined in claim 30, wherein calcium is present in an amount of about 0.03% to about 0.055% and the ratio of tin to calcium is not less than 20:1.

39. The cell as defined in claim 38, wherein silver is present in a range of about 0.008% to about 0.015%.

40. The cell as defined in claim 30, further including from about 0.008% to about 0.03% aluminum.

41. The cell as defined in claim 30, contained in a maintenance free battery.

42. The cell as defined in claim 30, contained in a sealed battery.

43. The cell as defined in claim 30, wherein the container, positive and negative plates and the separator comprise an automotive battery.

44. A grid supporting structure for use in a lead-acid battery having at least one positive plate and a negative plate disposed within the container, a separator disposed within the container and separating the positive and negative plates, the grid supporting structure having a layer of active material pasted thereto, the grid supporting structure comprising a lead-based alloy consisting essentially of lead, tin in the range of about 0.8% to about 1.1%; calcium in an amount such that the ratio of tin to calcium is greater than about 12:1, and silver in the range of greater than 0 to about 0.02%, the percentages being based upon the total weight of the lead-based alloy.

45. The grid supporting structure as defined in claim 44, wherein the ratio of tin to calcium is not less than 15:1.

46. The grid supporting structure as defined in claim 44, wherein the ratio of tin to calcium is not less than 20:1.

47. The grid supporting structure as defined in claim 44, wherein the silver content of the alloy is in the range of about 0.005% to about 0.017%.

48. The grid supporting structure as defined in claim 45, wherein the silver content of the alloy is in the range of about 0.005% to about 0.017%.

49. The grid supporting structure as defined in claim 46, wherein the silver content of the alloy is in the range of about 0.005% to about 0.017%.

50. The grid supporting structure as defined in claim 44, wherein calcium is present in an amount of about 0.03% to about 0.055% and the ratio of tin to calcium is not less than 15:1.

51. The grid supporting structure as defined in claim 50, wherein silver is present in a range of about 0.005% to about 0.017%.

52. The grid supporting structure as defined in claim 50, wherein calcium is present in an amount of about 0.03% to about 0.055% and the ratio of tin to calcium is not less than 20:1.

53. The grid supporting structure as defined in claim 52, wherein silver is present in a range of about 0.008% to about 0.015%.

54. The grid supporting structure as defined in claim 44, further including from about 0.008% to about 0.03% aluminum.

55. The cell as defined in claim 44, contained in a maintenance free battery.